

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 2000133300  
PUBLICATION DATE : 12-05-00

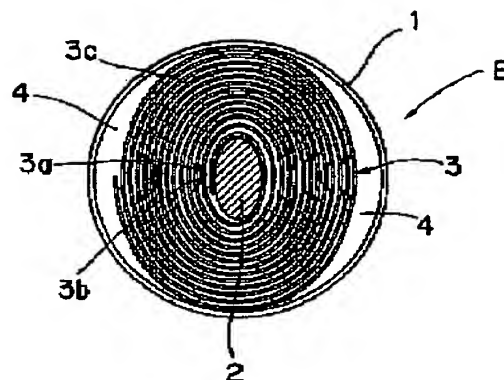
APPLICATION DATE : 27-10-98  
APPLICATION NUMBER : 10321435

APPLICANT : FURUKAWA BATTERY CO LTD:THE;

INVENTOR : TANNO SATOSHI;

INT.CL. : H01M 10/04 H01M 10/40

TITLE : CYLINDRICAL SECONDARY BATTERY



**ABSTRACT :** PROBLEM TO BE SOLVED: To efficiently absorb the volume change of an electrode group caused by expansion/contraction of electrodes attendant on charge/discharge cycles by housing an elliptical wound electrode group formed by winding on an elliptical winding core in a cylindrical can, and forming a gap between the electrode group and the can.

**SOLUTION:** One end of a belt-shaped separator is wound round an elliptical winding core 2, a belt-shaped negative plate and a belt-shaped positive plate are placed on opposite sides of the separator, they are spirally wound with tension applied to form an elliptical wound electrode group 3, and the electrode group 3 is housed in a cylindrical can 1. A crescent space 4 is formed on the opposite sides in the minor axis direction between the cylindrical can 1 and the elliptical wound electrode group 3. Even if volume change is produced by expansion/contraction of the positive plate 3a of the electrode group 3 attendant on charge/discharge cycles, the volume change is absorbed by the crescent spaces 4, damage of the separator 3c is prevented, and charge/discharge characteristics can be enhanced.

**COPYRIGHT:** (C)2000,JPO